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ABSTRACT

A perception generally prevails that more people are going to college, and enrollment figures bear that out. However, the proportion of young people getting a high school diploma peaked about 30 years ago at just over 75% and has slipped back to just over 70%. The proportion of young adults getting a bachelor's degree stabilized at 21 to 25% beginning 25 years ago, and only began to rise slightly again in 1996. This report describes these trends, the context in which they have occurred, and some implications for the future. Data from a variety of courses are used to paint a picture of an educational system that is not producing more high school graduates, that continues to display great social inequality, and that is not able to support greater proportions of students through to degrees in 4-year programs. The analysis makes it clear that the United States needs to come to agreement with the nature of the problem before defining any policy remedies. The bottom line for the United States is that the country is not growing educationally in terms of quantity and quality. (SLD)

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Preface

As our nation struggles to put in place policies and practices intended to leave no child behind, this new report—*The Closing of the Education Frontier?*—provides grist to confront the question of who gets ahead. Paul Barton presents illuminating data challenging the conventional wisdom that educational attainment has continued to increase during the last quarter century. He paints a picture of an educational system that is not producing more high school graduates, that continues to display great social inequality, and that is not able to support greater proportions of students through to degrees in four-year college programs.

Barton's synthesis of a variety of data sources is a significant contribution to helping us understand the past and current conditions of education in the United States. But he is also clear that, as a society, we need to come to agreement with respect to the nature of the problem before defining any policy remedies. From an economic perspective, the data are equivocal about whether stagnation in the number of higher education degrees is problematic. Issues around the distribution of wealth are always contentious. What does it mean for institutions of higher education, and the students who attend them, that a greater proportion of students do not complete their degrees? Similarly, what does it mean for our society that greater numbers of high school students are opting to forego the traditional high school diploma for the GED?

Defining these problems is a political exercise requiring social, educational, economic, and moral considerations. As we decide what we want of and from our society, we must align our policy incentives with desired outcomes. Barton's work forces readers to ask whether current incentives for higher education institutions are too focused on enrollment and not enough on completion and whether high schools' focus on test scores—used to audit school performance—actually encourages lower performing students to opt out of the system. He suggests that we may have, wittingly or unwittingly, developed incentive structures that prevent us from continuing the increase in educational attainment that characterized the greater part of the last century.

Barton makes explicit the risk in treating any particular piece of data as the definition of the problem. It is only when one draws on multiple sources of data that a full story of what is happening begins to emerge. While it is important to have outcome measures that reflect policy goals, we cannot afford to define the debate only by outcome measures, or we risk skewing both policy and practice. We have seen the limitation of considering college enrollment as the sole proxy for higher education attainment. If the educational frontier is in fact closing, then at least Barton has opened our eyes to some very powerful trends in American education. This report will be surprising and even discomforting to many. We hope that it will encourage thoughtful debate and action.

Drew Gitomer
Senior Vice President, Research and Development
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Introduction

The United States, ever growing and for a great many years expanding geographically, has been a place of frontiers, with opportunity for improvement and a people who continually sought to improve themselves. Its people settled a wide expanse; built the transportation systems that knitted the country together; nurtured democracy; created an education system with greater access than ever seen before; absorbed millions of newcomers of differing nationalities, races, and ethnicities; and built an industrial economy that emerged as the strongest in the world.

Except for the limits of geography, all these frontiers have remained open. And when historian Frederick Jackson Turner announced the closing of the western frontier in 1893, intense discussion, speculation—and consternation—followed about what this would mean for Americans, who had been ever able to pick up and relocate to find land and opportunity.

The opportunity to get an education—and a continual increase in attainment—is another critical frontier, important to reach other milestones in a history of progress on one front or another. The United States has recently been engaged in an effort to improve the *quality* of education offered, and while the results are not yet in, it seems there is considerable resolve to see it through. But here we address the question of *quantity*. Have we stopped growing in terms of graduating young people from high schools and colleges? The experience of the last quarter century or so is clear enough to warrant serious examination of the question.

How important is continued growth in the quantity of those graduated, and how important is it that education continue to be "the balance wheel of the social machinery," as Horace Mann called it? How intertwined is this continual growth with the economy, the labor market, the successful absorption of immigrants (including the influx in the 1990s, especially of undocumented immigrants, many of whom had limited schooling), and the earnings of American workers? And what are the sources of renewed growth? These are large questions. At best, the author hopes to frame them for careful examination and provide the kind of discussion that might establish or dismiss their importance.

It is a fact that the rate of both high school and college graduations has leveled off since the mid- to early-1970s. Whether this is acceptable or a cause for concern that the nation should do something about is a matter of judgment that entails sizing up the consequences and assessing individual values. But the change from our past is striking and worthy of discussion and examination.

The Peaking Of Attainment?

If the public were polled about whether we are paying a lot of attention to raising educational achievement, the answer would likely be a resounding yes. The "education reform movement" has been in high gear since the *Nation at Risk* report in 1983 and the Education Summit of 1989, which brought together the President and the nation's governors to create the national goals that were subsequently ratified by Congress. "Standards-based reform" has spread to all the states, to one degree or another, and Congress has now passed a major piece of legislation called for by President George W. Bush, who vows to "leave no child behind." Prevalent in the early 1990s, talk about measuring the quality of achievement in higher education is even renewed, but very little by way of "reform" has been attempted.

As regards higher education, a perception generally prevails that ever more people are going to college, and enrollment figures bear that out. Candidates for governor and president put improvement in the quality of education, and access to more education, at the top of their priorities. Therefore, it will come as a surprise to most Americans that digging deeply into the statistical volumes will reveal three facts:[1]

One: The proportion of young people getting a regular diploma after attending four years of high school—after rising throughout the history of the United States—peaked about 30 years ago by one measure, at just over 75 percent, and has now slipped back to just over 70 percent.

Two: The proportion of young adults (age 25-29) getting a bachelor's degree—after rising throughout U.S. history—stabilized at 21 to 25 percent beginning 25 years ago, and only began to slightly rise again in 1996.

Three: The percentage of the entire population 25 years and over with a bachelor's degree pretty much caught up with the young adult rate in the 1990s, after a history in which continually better educated young people replaced less educated older people.

This report describes these trends, the context in which they have occurred, and some implications for the future. The over-arching question is: How important is it that these rates of educational attainment have now been level for a quarter century, and should we be making more effort to resume an upward growth? Some may conclude that the situation is acceptable, but it does seem worthy of examination.

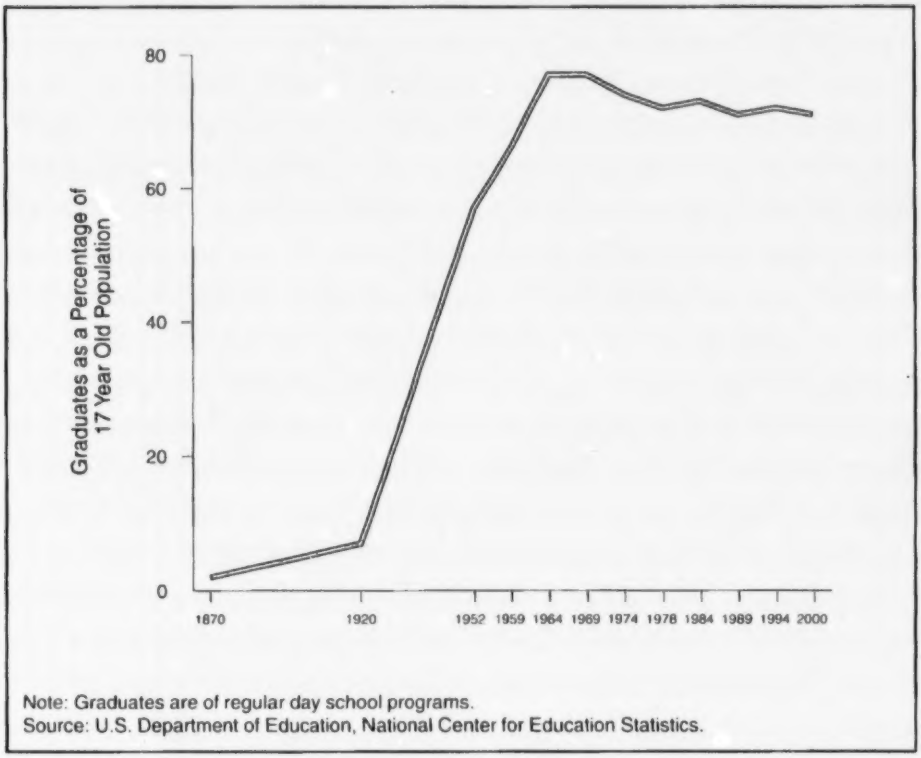
High School Graduation

At the turn of the 20th century, only a tiny proportion of young people completed high school and received a high school diploma, rising to about one in six by 1920 (see Figure 1). The climb was continuous, to half in the late 1940s, to two in three by the late 1950s, and to over three in four during the 1960s. But since the late 1960s, there have been no gains. In fact, there has been slippage down to 71 or 72 percent in the late 1990s.

The measurement of the high school completion rate has always been somewhat problematic, for a number of reasons. The data used here allow a historical comparison of the ratio of high school graduations in any one year to the number of 17-year-olds in that year, a statistical series long published by the National Center for Education Statistics (NCES). Of course, some graduates are 18 or even 19 years old when they graduate, but the ratio of graduates to 17-year-olds should give us an approximate rate and reflect the trend over time. Thomas G. Mortenson, of *Postsecondary Education OPPORTUNITY*, recently made

[1] Statistics that apply to all young adults, of course, conceal differences among population groups. Separate stories are the divergence in the graduation rate among men and women, the lower rates for most minorities, and the higher rates for Asian Americans. For a recent account of these differences, see *Postsecondary Education OPPORTUNITY*, Number 118, April 2002.

Figure 1: High School Graduates Compared with the Population 17 Years of Age, 1869-70 to 1999-2000



Note: Graduates are of regular day school programs.
Source: U.S. Department of Education, National Center for Education Statistics.

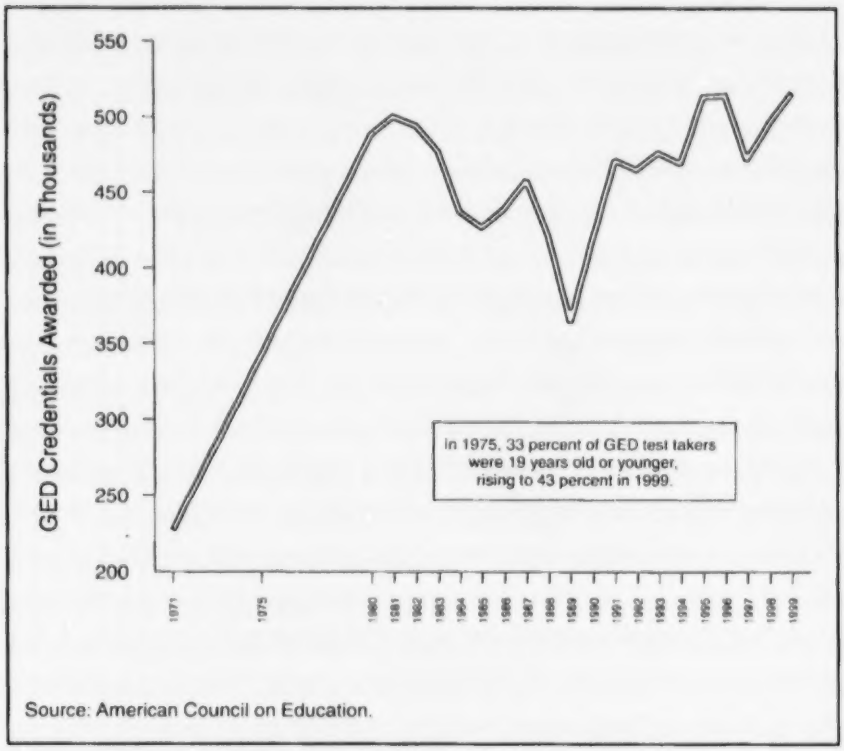
estimates on another basis, taking the ratio of high school freshmen in one year to the number of graduates four years later, with a very similar result.[2] Some estimates that exclude General Education Development (GED) certificates put the current rate around 75 to 76 percent.

The most *used* set of data comes from the Current Population Survey of the U.S. Bureau of the Census, where people are asked whether they graduated from high school. This survey includes those who got a GED certificate, and it is not now possible to separate regular high school diplomas from GEDs in this published statistical time series. On this basis, 88 percent of those aged 25-29 were high school graduates (or more) in 2000, a little higher than the 85 percent of 20 years ago. What seems to have happened of late is that getting regular diplomas has dropped modestly, with the drop more than made up by more people in the 19 or under age group getting a GED certificate. In fact, the meaning of getting a "regular" diploma is evolving, with states introducing different kinds of diplomas, depending on the nature of the student's academic achievement, and some states creating diplomas for their GED recipients.

Of course, there is wide variation in the "regular" graduation rate by state and by race and ethnic groups among the states. Jay P. Greene of the Manhattan Institute has made estimates by looking at eighth grade enrollments in 1993 and the number of students getting a high school diploma in 1998 (with

[2] Similar graduation rates were also calculated by the Education Trust.

Figure 2: General Education Development (GED) Credentials Issued, 1971 to 1999



Source: American Council on Education.

some adjustments to account for students moving into and out of the area). The state with the highest graduation rates, by these estimates, was Iowa at 93 percent, and the lowest was Georgia at 57 percent. Across states, the Black rate ranged from a low of 40 percent to a high of 71, and the Latino rate from 32 to 82 percent.[3]

Doubtlessly, the GED has become an important factor in reporting the educational attainment of the U.S. population. Credentials awarded rose from 227,000 in 1971 to 312,000 in 1975 and to 500,000 in 1981 (see Figure 2). A decline then set in, likely related to demographic changes, with awards dropping sharply by the end of the 1980s and then rising back to previous levels by the mid-1990s. The great majority of GEDs go to people under age 25. The percentage going to people age 19 or younger has risen substantially, from 33 percent in 1975 to 43 percent in 1999; the GED is an increasingly important factor in tracking the attainment of young people around the traditional age of high school graduation.

Should we be comfortable with this increase in the number of those in the under 20 age group receiving GEDs? Certainly we can view the development of the GED as a very positive one, since it constitutes a way for people to make up, at least somewhat, for missing graduation from the regular school system. It also has permitted credentialing based upon the efforts of a great many "second chance" institutions and programs, such as adult

3 Jay P. Greene, *High School Graduation Rates in the United States*, the Manhattan Institute for Policy Research, prepared for the Black Alliance for Educational Options, November 2001. Estimates with such a time lag approach have also been made by the Education Trust.

education and community-based organizations. But on average, at least, the GED is not a complete equivalent, and arguably, it is not satisfactory to trade off regular graduations for GED certification.

A number of studies have been made of the meaning of the GED, and this work was synthesized by the U.S. Department of Education in 1998.[4] The report makes the point that the GED itself is not an education program, but a way to certify the knowledge a person has. GED examinees spend a median of 30 hours in preparation, although 24 percent spend over 100 hours. This compares to about 410 hours in core curriculum classes in a typical school year. Also, with their average of 2.1 years of additional schooling, "high school graduates typically had 861 more hours of core curriculum classes."

The general conclusion of the synthesis was as follows: "In some respects, GED recipients resemble high school graduates; in others, they resemble dropouts; in still other ways, they fall between the two. Given these mixed findings, the common practice of counting GEDs as high school graduates in educational statistics should be reconsidered." At a minimum, graduation data should be collected in such a way that we can separate regular graduates from those who obtain a GED. As we track the results of education reform and higher standards, we need to know what effect they are having on school retention.

Recently, however, the American Council on Education revised the GED so that it goes beyond multiple-choice testing. As this new test is administered and passing scores are set by the individual states, it will remain to be seen whether the test proves to be more demanding in terms of the level of educational achievement attained and what the outcome is for those who receive the GED certificate.

Returning to the basic point of this discussion, the rate at which young people have completed high school has remained fairly level for decades, with slight declines despite many campaigns to reduce the dropout rate. None has been successful, at least in terms of the national average.[5]

College Attendance and Graduation

A general perception exists that more young people are attending college than ever before, and this is, in fact, the case. What gets attention is the fact that more high school graduates are entering college in the fall after they graduate, and the college enrollment rates of people aged 18 to 24 are up over what they were 15 years ago; this fact is well reported, and the statistics are abundant. The word on the street has been that to get anywhere anymore, one must have a college education. Employment and earnings data support this view, and more and more young people are trying.

At the beginning of the 1980s, one half of high school graduates entered college the fall after they graduated from high school. Just a decade and a half ago, the W. T. Grant Foundation issued *The Forgotten Half*, a much-quoted report calling the nation's attention to the plight of those not going to college.[6] Then the percentage climbed to 60 percent by 1989, to 67 percent by 1997, and dropped to 63 percent by 1998. The average (mean) of the 1990s was around 63 percent, or 13 percentage points higher than the early 1980s (see Figure 3).

By any standard of the past, that is a large increase. A nearly comparable increase is seen in college enrollment for the whole college-going age group of 18 to 24. At the end of the 1970s, 31 percent were enrolled;

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4 David Boesel, Nabeel Alsalam, and Thomas M. Smith, *Educational and Labor Market Performance of GED Recipients*, U.S. Department of Education, National Education Library, 1998.

5 An emerging factor that is important in the dropout picture is the increased immigration of people who were dropouts before they came to the United States.

6 William T. Grant Foundation Commission on Work, Family, and Citizenship, *The Forgotten Half: Non-College Youth in America*, Washington, DC, January 1988.

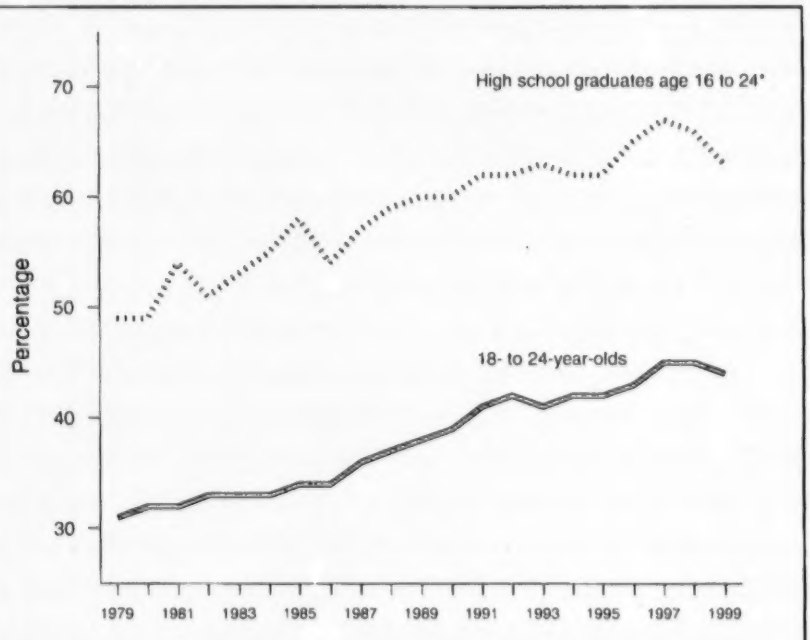
it had climbed to 41 percent by the end of 1991, to 45 percent by 1997, and it held at that level through 1999 (see Figure 3). The bulk of these gains were among women; in October 2000 there were 118 women in college (age 18-24) for every 100 men.

What is not as well known and written about is the *rate of college graduation*, the percent of young adults who are actually *completing* school and getting a bachelor's degree. Given our history of ever increasing levels of education in the population and the strong rise in college enrollment, it is reasonable to assume that an increasing proportion of young Americans is getting a college degree. But, overall, that has not been the case.

In 1940, just 5.9 percent of 25- to 29-year-olds were awarded a bachelors degree, with a steep increase over the next 25 years to 16.4 percent by 1970 and to 21.9 percent by 1975 (see Figure 4). Then the growth stopped, the percentage peaking at 24 in 1977 and staying around 21-22 in the 1980s, returning to 23-24 percent for most of the 1990s. In the last half of the 1990s, after over two decades of stability, the percentage getting degrees has risen to the high 20s, due to a surge in the graduation rates of women. If this level is sustained, the graduation rate will be running three or four percentage points above the level of the mid-1970s.

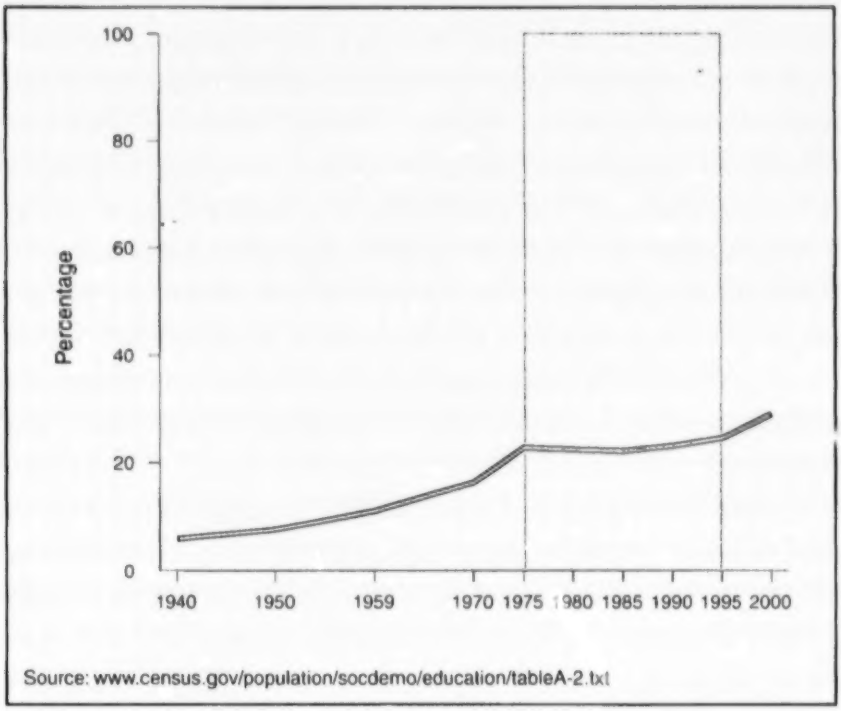
We have become accustomed to a general rise in the average educational attainment of the adult population as a whole, as less educated older people were replaced by better-educated young people. The percent of all adults 25 years of age and over with a four-year degree rose from 17 percent in 1980 to 21 percent by 1990. By 1994, the number increased to 22.2 percent, *practically the same as the 23.3 percent for those aged 25-29.* After that, the gap opened a bit to three or four percentage points. Samuel Eliot Morison et al., in their history of the American republic, observed: "America

Figure 3: College Enrollment Rates for Recent High School Graduates Age 16 to 24 and All 18- to 24-Year-Olds



Source: National Center for Education Statistics, *Digest of Education Statistics*, 2001.
* Enrollment in college in October of each year for individuals age 16 to 24 who graduated from high school during the preceding 12 months (includes GED certificates).

Figure 4: Percentage of the 25 to 29 Year Old Population Completing Four or More Years of College, 1940 to 2000



Source: www.census.gov/population/socdemo/education/tableA-2.txt

was the first country in modern history where each generation had more education than its forebears . . ."[7] Increasingly, young generations are now getting little more by way of educational attainment than did their parents' generations.

A Quarter Century of No Growth

Clearly we have experienced a long period of no growth in the proportion of our young people obtaining diplomas from high school and college. We can take some comfort in the very recent upturn in the rate at which young adults (at least women) are getting a college degree, although we do not yet know what that portends by way of a trend. But we see no such rise in the proportion graduating from high school. In fact, there has been a decline, although we are seeing a rise in those getting a GED. So should we be asking the questions of whether we have reached a saturation point in our desire for more education as a population? In our need for it? In the economic value of a higher education? In our ability or willingness to provide the money for it, either out of family or public resources?

The trends of the last quarter century have caught the attention of staff of the U.S. Census Bureau. In May 2000, the Bureau published a working paper titled, *Have We Reached the Top? Educational Attainment Projections of the U.S. Population*.[8] The paper opens:

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[7] Samuel Eliot Morison, Henry Steele Commager, and William E. Leuchtenburg, *A Concise History of the American Republic*, New York: Oxford University Press, 1977.

[8] Jennifer Cheeseman Day and Kent J. Bauman, *Have We Reached the Top? Educational Attainment Projections of the U.S. Population*, Working Paper No. 43, U.S. Bureau of the Census, May 2000.

There is growing concern that educational levels in the U.S. population may stagnate or even decrease in the coming decades. Factors contributing to this concern include a leveling of education levels of entering cohorts compared to those that are retiring, and growth in population numbers of ethnic groups and immigrants with traditionally lower education levels.

The authors have developed new projection models to determine the future direction of attainment. Their results lead them to conclude that we have not reached the top, and that some growth will continue. They caution, however: "If younger cohorts were to get less education, our projections may be overly optimistic."

The stability of regular high school graduation rates and college completion for such a long period has provoked new efforts by demographers to look into the future. If attainment of these degrees is going to grow at all, the evidence is that it will likely be at very much slower rates than we have long been accustomed to. The record of the last quarter century is clear enough to put some important questions on the table, such as: Why has growth stopped or slowed to a crawl? Where is the stoppage or slowdown concentrated, and what does it mean for equity and access? What are the consequences and implications for the American society and economy and for the goal of equality of opportunity across racial and ethnic groups? What are the implications for inequality in the overall earnings and income distribution given the existing differences in educational attainment? This report will try to frame these questions and understand their importance rather than provide answers—for this author does not have them. The effort itself was undertaken as a result of surprise and perplexity after absorbing what the statistical series seemed to be revealing.

After being accustomed to having the highest rates of attainment of a college/university education, the United States has now lost its preeminence in the world. According to the Organization for Economic Cooperation and Development (OECD), a U.S. four-year degree would be in the category of "medium first degree tertiary (type) programs." In such programs for 1998, the graduation rate was 32.9 percent for the United States, compared to 33.2 percent for Great Britain, 33.3 percent for Norway, and 33.3 percent for the Netherlands. Just below the United States are Japan (27.7 percent), Canada (27 percent), and New Zealand (26.1 percent).[9]

One striking contrast among the countries is the variation in the dropout rate in higher education. Of course, comparisons are difficult and OECD uses varying time periods and summaries from studies carried out in different ways. The rate reported ranges from a low of 11 percent in Japan to 65 percent in Italy; it was 37 percent in the United States. Out of 20 countries, 13 countries have dropout rates lower than the United States. Getting more of those who do start to make the higher education journey through the system to finish it would make a large change in how the United States compares internationally.

Inequality and Persistence

Given the well-known inequalities in educational attainment, the reader, by this point, may be thinking that the sources of growth in the rate of getting diplomas are obvious. According to the U.S. Census Bureau, in 1999, 27 percent of Hispanic 16- to 24-year-olds did not have a high school diploma *or* a GED, compared to 13 percent for Blacks and 7 percent for Whites. The comparable percentage for the lowest quartile in family income is 21, compared to 4 for the highest quartile; there is plenty of room for—and need for—growth in high school completion for minority and lower-income families.

In 1999, 66 percent of White high school graduates had enrolled in college the following fall, compared to 59 percent of Black graduates (who have been narrowing this gap) and just about half

[9] Organization for Economic Cooperation and Development, *Education at a Glance: OECD Indicators*, 2000, Paris, 2000.

of Hispanic graduates (on the basis of a three-year moving average).

Thirty-six percent of White 25- to 29-year-olds who had completed high school had attained a bachelor's degree or higher by 2000, compared to 21 percent of Blacks and 15 percent of Hispanics. A lot of room clearly is left for minority groups to catch up with the attainment level of the majority.

Enlarging the sources of growth in college graduation will mean facing some hard facts with regard to costs and resources. The reasons for failure to improve graduation rates from high school (and the achievement of those who do graduate) is perhaps more elusive, as investments in public education have risen. But in the sphere of higher education, tuition costs have grown at a much greater rate than prices generally, the proportion of costs covered by financial aid programs has shrunk, and state appropriations to higher education have declined in terms of the proportion of state revenues earmarked for higher education.[10] Of course, costs and resources are intertwined with the ability of minority groups to catch up with the majority.

It is reasonable to conclude that a considerable resource available to increase the rate of college graduation lies in the large group of young people who start college but do not finish. It is, of course, not easy to determine how much educational value ensues for the individual, the society, and the economy when young people spend six months or a year or two in college without getting a certificate or a degree. (There has been research, but more is needed.) We will go into this a bit more below. ***But it is clear that more and more young people are starting down the college path and not reaching their destination.*** The apparent increasing rate of non-completion has not been much examined and debated, to this author's knowledge, as an issue of public educational policy and practice, although individual colleges and universities are putting more emphasis on student retention as they struggle to maintain or increase their average enrollment.

It is, in fact, hard to get a statistical handle on the college non-completion rate, in terms of trends over time, even harder than for the high school non-completion rate. In *Towards Inequality*, a case was made that non-completion was increasing, based heavily on circumstantial evidence; the data are firmer now. A comparison of the rate of entry into college and the proportion of 18- to 24-year-olds enrolled in college (Figure 3) with the proportion of 25- to 29-year-olds completing four or more years of college (Figure 4) establishes that a higher percentage must be settling for less than a four-year college degree. Enrollments have long been rising steadily while graduation is flat, until the last several years.

A longitudinal study in which those who enter college are followed over a considerable period of time is needed to determine the pattern of persistence. NCES started such a study in 1989 and completed a five-year follow-up in 1994.[11] In five years, 18 percent were still enrolled and 28 percent had no degree and were no longer enrolled. Another study was started of the 3.3 million students who enrolled in college in the 1995-1996 school year, and the first follow-up was conducted in 1998.[12] At this point, the rate of completion between comparable time periods cannot be determined, because not enough time has elapsed in the second study for those students to have received a bachelor's degree. We do know that of those entering in the 1995-1996 school year, 32 percent had no degree and were no longer enrolled three years later. This compares with the 28 percent who had no degree and were no longer enrolled after five years. This suggests a rise in non-completion, with more students leaving the system after three years than after five years in the earlier study.

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[10] A review of these developments can be found in Paul E. Barton, *Towards Inequality: Disturbing Trends in Higher Education*, Policy Information Perspective, Policy Information Center, Educational Testing Service, October 1997.

[11] National Center for Education Statistics, "Postsecondary Education Longitudinal Survey," *Digest of Education Statistics*, 1996.

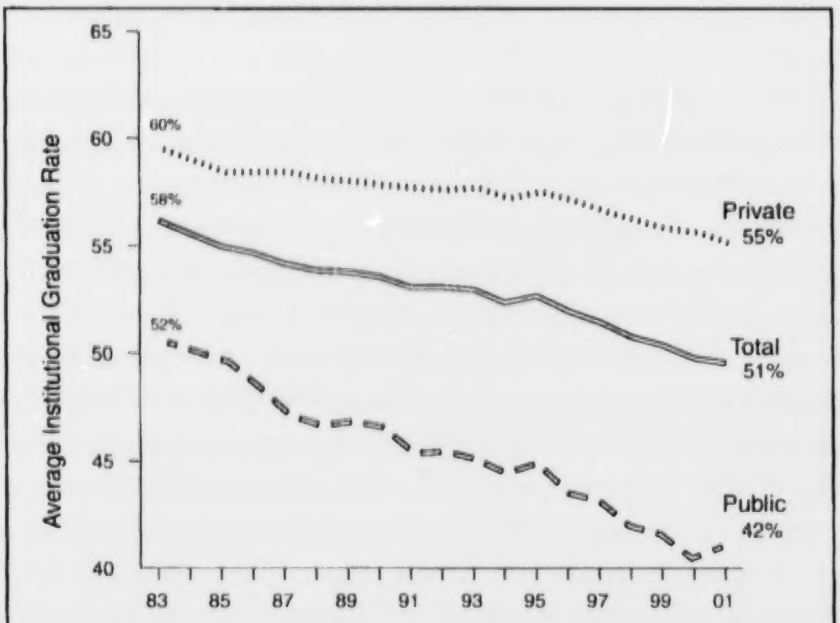
[12] National Center for Education Statistics, *Beginning Postsecondary Students Longitudinal Study, First Follow-Up, 1996-98*, Methodology Report, NCES-2000-157, April 2000.

If NCES does a five-year follow-up, a clear picture will be available of precisely what happened to the class entering in 1995-1996 as compared to the class entering in 1989-1990. These studies will also shed light on trends for students transferring among colleges and continuing their education after receiving an associate's degree.

Other data are available that show the persistence rates of students from the freshman year to the start of the sophomore year. There is deterioration in these persistence rates for private four-year institutions and for both private and public two-year institutions. The persistence rates vary greatly among categories of institutions: 91.6 percent for those that are "highly selective," 81.8 percent for "selective," 72.4 percent for "traditional," 66 percent for "liberal," and 60.6 percent for those with "open enrollment." The largest decline from 1991 to 2001 was in those with open enrollment.[13]

Data are also available on institutional graduation rates—the percentage of those who enter four-year colleges and universities as freshmen and five years later have graduated. There has been a steady decline in these graduation rates since 1983. The graduation rate in public four-year institutions dropped from 52.2 percent in 1983 to 41.9 percent in 2001, and in private schools from 59.5 percent in 1983 to 55.1 percent in 2001 (see Figure 5). However, from this data we do not know how many transferred to other institutions and graduated, so a precise measure of change remains elusive. The rates vary with selectivity, ranging from 78.8 percent graduating from highly

Figure 5: Average 5-Year Institutional Graduation Rates at Public and Private 4-Year Institutions, 1983 to 2001



Source: *Postsecondary Education OPPORTUNITY*, Number 110, August 2001.

[13] *Postsecondary Education OPPORTUNITY*, Number 110, August 2001.

selective institutions, down to 36.5 percent in schools with open enrollment.[14]

While graduation is not the objective of many students who enroll in community colleges, a similar decline in graduation rates has occurred there, dropping from 44 percent graduating in three years in 1983 to 37 percent in 2001.

A sure sign that we do not attach enough importance to these high attrition rates is the failure to have good measures of them or of the trend in attrition over time. As Daniel Patrick Moynihan has said, "In our country, we only do what we measure." So we must start with better records of how many and of what income, race, and ethnicity are those who fall by the wayside. The data will help focus attention and also will help frame the right questions. Some actions to consider include the following.

- The sources of growth for getting higher rates of college completions are intertwined with dealing with inequities in opportunity—although, of course, eliminating inequities is a worthy goal on its own. Those who start college and do not finish are disproportionately Black, Hispanic, and American Indian and have lower income across all races. Federal and state financial aid policies are critical here.

- Financial aid for those less well off—such as Hope scholarships—have encouraged more to enter college. But we need more attention to what happens after they get there and what is needed to sustain effort to graduation.

- We know that success in college is dependent on high achievement and the taking of rigorous courses in high school (and earlier). And we know that about 3 in 10 college freshmen are taking remedial courses. Success in improving college completion rates is tied to success in providing more rigorous courses earlier and in raising standards—all the more important for minorities and students from lower socio-economic backgrounds generally.

- We also know that persistence in college is not all a matter of finances. A lot has to do with the culture of particular colleges and factors that are in the control of colleges. Vincent Tinto summarizes the results of the many studies that have been made of these college environments.[15] One example: "It is of little surprise to discover that institutions with low rates of student retention are those in which students generally report low rates of student faculty contact."

- Greater awareness is needed of the success and failure of individual colleges and universities in getting the students through to graduation. While retention rates are generally available, they vary with the characteristics of the student body, as well as with the culture and climate of the college. For comparison, these differences need to be taken into account.

One such effort was made by *Postsecondary Education OPPORTUNITY*, where estimated graduation rates (using student background characteristics) were compared with actual rates, institution by institution, and then ranked "according to their success (or failure) to graduate the students they admit." The top ranking school had an expected graduation rate (within six years) of 40 percent and an actual rate of 77 percent. The bottom ranking school had an expected rate of 75 percent and an actual rate of 21 percent.[16]

Perhaps financial aid and support policies should take into account those schools that are doing too much churning of students or operating revolving door institutions. At a minimum, such measures should be made widely available.

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14 *Postsecondary Education OPPORTUNITY*, Number 117, March 2002.

15 Vincent Tinto, *Leaving College: Rethinking the Causes and Cures of Student Attrition*, University of Chicago Press, 1987, with a revised edition in 1994.

16 *Postsecondary Education OPPORTUNITY*, Number 58, April 1997.

The American Reliance on Education

How important is it that we seem to have stopped growing in formal education attainment? While that is a hard question to answer, education has historically been very important. Max Lerner in *America as a Civilization* (1957) commented that Americans "have an extravagant reliance on education."[17] Studies by economists have shown the importance of education in economic growth and productivity. The person perhaps most representative of American education, Horace Mann, called education "the balance wheel of the social machinery."

When the United States has faced problems, it has typically turned to the education system for solutions. The assimilation of immigrants was sped by "Americanization" classes in public schools. In the late 1950s, education in science and mathematics was America's response to Sputnik. In the 1960s, it was the response of the Kennedy administration to "getting America growing again." Society's increasing involvement in drugs was to be countered by programs in the schools, teaching students to "just say no." Teenage pregnancy was to be approached, in part, through increased education. Just name a problem, and there likely has been a movement to deal with it in the schools.

The intractable problem of prejudice and discrimination was often said to require education. As a Princeton University graduate student in the late 1950s, this author participated in a large study that examined the role of education in "Resistance and Readiness for Desegregation," as the study and resultant book was called. Research for that study included a review of numerous studies on the role of education in shaping attitudes and belief systems. The study found that, as formal education increased, noticeable shifts tended to occur from common sense to science as acceptable evidence; from punishment to reform in penological theory; from violence and direct action to law as agents of policy; from patriarchy to democracy in spousal relations; and from aesthetics to creativity in patterns of recreation, among others. This study also found less prejudiced behavior as education advanced.[18]

In a book published in 1991, Ernest Pascarella and Patrick Terenzini synthesized over 2,600 research studies.[19] The list of areas in which positive effects of a college education occur is extensive:

- A host of improvements in learning and cognitive development in verbal, quantitative, oral and communication, analytical, and critical thinking skills, as well as the use of reason and evidence to address ill-structured problems and intellectual flexibility;
- Aesthetic, cultural, and intellectual values;
- Social self-concept;
- Self-esteem;
- Intellectual orientation;
- Personal adjustment and psychological well-being; and
- Use of principled reasoning in judging moral issues.

Other national studies have found association with civic and community affairs, participation in politics, and in voting. A function of education not easily captured in research studies is the pervasive role it plays in social and economic mobility in a classless-by-birth society. Much of our cohesiveness in a land of large and growing inequality in income and status is achieved as a result of the ability of the individual to move up through effort and education. Our recent

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17 Max Lerner, *America as a Civilization*, New York: Henry Holt, 1957.

18 Paul Barton, Bernie Burrus, and Melvin Tumin, "Education, Prejudice, and Discrimination," *American Journal of Sociology*, Vol. 23, No. 1, February 1958, pp. 41-49. This was one of the many journal articles resulting from the study, in addition to the book.

19 Ernest Pascarella and Patrick Terenzini, *How College Affects Students: Findings and Insights from Twenty Years of Research*, San Francisco: Jossey-Bass, 1991.

history is one of a growing inequality of income, making individual opportunity ever more necessary for improving relative achievement. It is hard to overestimate the important role education has played and the role historians have ascribed to it. In his 1953 history *The United States of America*, Henry Bamford Parkes put it this way:

> *The expansion of education on all levels was another example of the continuity of the American heritage. It was an article of faith for most Americans that as much education as possible should be given to as many people as possible. After the final establishment of compulsory education in all states after 1918, the process of extending the years of compulsory attendance and enlarging the number of public high schools went up steadily.*[20]

The United States enters this new century much changed in this respect. We have stopped growing, or are barely growing, in the portion of the population getting degrees. Ever more young people who do get through high school are entering college—at least up to 1997—but seem to be faltering, either as a failure of resolve or as an insufficiency of resources or both. It is not apparent in the national discourse that there is any widespread appreciation for this development of the last quarter century or so, nor is there examination of what the consequences might be for a well-being so rooted in continued educational growth. The facts are such as to warrant this examination, even if we do not dramatize the importance of education growth as H.G. Wells did when he said that the "human story becomes more and more a race between education and catastrophe."

While it is useful to describe the development of the intellect in these instrumental terms, it is not meant to diminish its broader importance in the human experience. *In The Passion of the Western Mind*, Richard Tarnas conveys our early heritage: "In Socrates, thought was confidently embraced as a vital force of life and an indispensable instrument of the spirit. Intellect was not just a profitable tool . . . it was, rather, the divine faculty by which the human soul could discover both its own essence and the world's meaning . . . However arduous the path of awakening, such divine intellectual power lay potentially resident in humble and great alike."[21] Cutting to the essence, as he was wont to do, the late Stephen K. Bailey used to say, as he rapped his knuckles on his forehead, "I get an education so that later in life when I knock on me, somebody answers."

These are some of the broader considerations. We explore in more detail the labor market and economic consequences—education as "a profitable tool."

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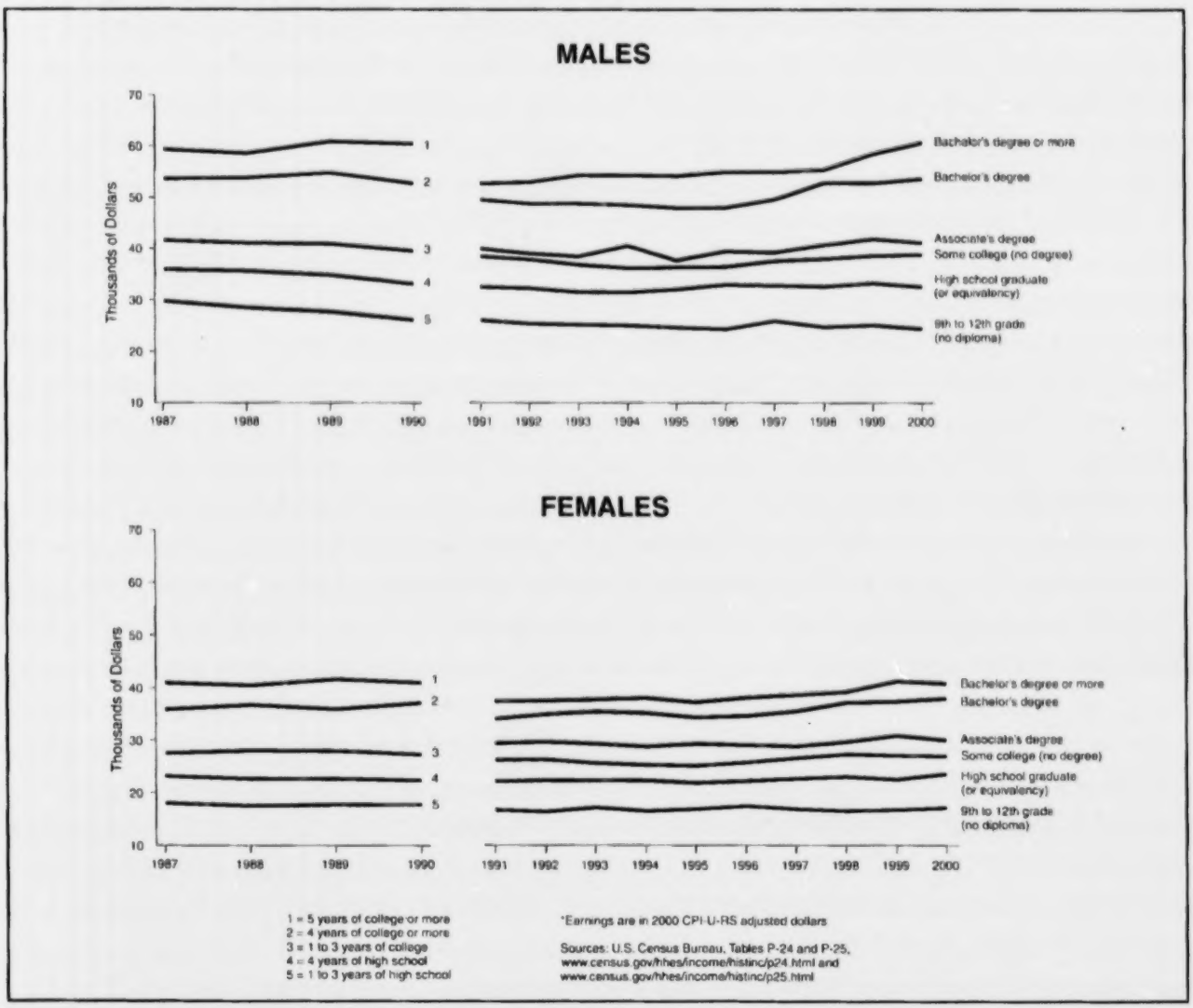
20 Henry Bamford Parkes, *The United States of America, A History*, New York: Alfred A. Knopf, 1953.

21 Richard Tarnas, *The Passion of the Western Mind*, New York: Ballantine Books, 1991.

Labor market and human capital economists have been, for decades now, pointing out the relatively greater demand and remuneration in the United States for people with college degrees and the relative decline in demand for those with only a high school education or less. National and international assessments have shown strong economic rewards for literacy and math proficiency. Some declines also occurred in absolute earnings, in real dollars, for people with less than a college degree, especially among young male adults. The history of the recent past, since 1987, is shown in Figure 6. Data are for full-time, year-round workers. Men and women who have a bachelor's degree or more have gained modestly in real dollars. When those with just a bachelor's degree are separated out, real earnings have been fairly level, with only a little gain at the end of the 1990s after an extended period of unprecedented economic growth. The real earnings of men and women with an associate's degree were stable during this period. A decline in earnings is

Figure 6: Median Annual Earnings* of Full-Time, Year-Round Workers 25 Years Old and Over, by Educational Attainment, 1987 to 2000



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seen for men with some college but no degree, with a recovery toward the end of the period and a dip and recovery for women. For all others from 1987-1999, there was a decline. Those doing the worst were high school dropouts, with annual earnings falling sharply until 1996, with some recovery after that. The increased supply of immigrants at the low skilled end of the labor market contributed to declining earnings of dropouts.

The College Degree

Tracing the labor market role in the patterns of educational attainment would be an extended undertaking that would need to cover the whole period of the last 25 years when attainment plateaued. But these limited data do show that demand—as expressed in terms of what employers will pay—has not been rising faster than the supply of those with a college education, until the education required exceeds the bachelor's degree. *Absolute* returns to the individual who completes college have not been rising and luring more to complete college work, although the returns have been growing *relative* to those who have less education (see Figure 6). On the cost side of the ledger, tuition has risen more rapidly than general inflation.

Decisions about pursuing a college education have been made in an environment unfriendly to non-college graduates. The presumption has been that because of rising *relative* earnings, demand for college graduates is increasing, and that should attract more youth to college. But when young people look at these basically stable earnings for college graduates combined with greatly rising costs for a college education, perhaps that dampens the drive to spend the effort and money to pursue and complete a four-year degree.

What else do we know about the need for college-educated people in the economy that might cast light on whether people choose to get degrees? The U.S. Bureau of Labor Statistics (BLS) projects employment by occupation and by the educational requirements of those occupations. The new projections, from 2000 to 2010, show greater growth in occupations requiring postsecondary education than did the projections from 1996 to 2006. While average employment in all occupations is expected to grow by 15 percent, employment in occupations requiring a bachelor's degree or higher is expected to grow by 22 percent, about the same as for occupations requiring only a bachelor's degree (see Table 1). In addition, a 24 percent increase is expected in occupations requiring an associate degree or postsecondary vocational award. (The increase of associate degrees alone was 32 percent, higher than any other category of postsecondary education.)

The BLS also has projected the number of job openings between 2000 and 2010. Job opening projections take into account both employment growth and the need to replace workers who leave jobs to enter other occupations, retire, or leave the labor force for other reasons. The importance of differentiating growth and replacement needs is illustrated by the BLS projection that "more job openings are expected to result from replacement needs (35.8 million) than from employment growth (22.2 million) . . . The only major group with fewer openings from replacement needs than from employment growth is professional and related occupations, the fastest growing." Generally, jobs requiring advanced education have less turnover; in education and career planning, both job growth and job openings should be considered.

The projected growth rates for employment in occupations requiring college degrees indicate much faster than average growth and suggest some acceleration in the need for workers with a college degree. This contrasts with a past period when the proportion of young adults getting a four-year college degree has been mostly stable. Still, of the total job openings expected by 2010, 7 out of 10 are expected to require only work experience or on-the-job training.

One way to look at the need for more college graduates and at the absorption of college graduates into the economy is to look at how they are employed and the extent to which they are using the educations they received. If a considerable proportion end up

Table 1: Employment Projections by Source of Education or Training, 2000 to 2010*

Most Significant Source of Education or Training	Percent Change in Employment 2000-2010	Percent Distribution of Change in Employment	Percent Distribution of Total Job Openings
Total, All Occupations	**15.2**	**100.0**	**100.0**
Bachelor's or Higher Degree	21.6	29.3	20.9
First Professional Degree	18.2	1.7	1.2
Doctoral Degree	23.7	1.6	1.3
Master's Degree	23.4	1.5	1.1
Bachelor's or Higher Degree Plus Work Experience	19.4	6.4	4.7
Bachelor's Degree	22.5	18.1	12.6
Associate Degree or Postsecondary Vocational Award	24.1	12.8	9.3
Associate Degree	32.0	7.3	4.5
Postsecondary Award	18.2	5.5	4.8
Work-Related Training (Work Experience or On-The-Job Training)	12.4	57.9	69.8

*An example of how to read the table: From 2000 to 2010 there is expected to be an increase of 21.6 percent in employment where the most significant source of education or training is a Bachelor's degree or higher. Jobs with this education requirement are expected to account for 29.3 percent of the change in employment, and for 20.9 percent of total job openings during that period.

Source: Daniel E. Hecker, "Occupational Employment Projections to 2010," *Monthly Labor Review*, U.S. Department of Labor, November 2001, page 83.

doing work that does not require a college degree, the word will get around and fewer will go to college, or more of those who do go will change the kinds of jobs they prepare for. NCES used to conduct a survey of the jobs recent graduates obtained but curtailed it after the 1992-1993 school year. However, there is a new study that has added a dimension not previously available. NCES recently published a report that discusses the 1997 work experience of 1992-1993 degree recipients who were not enrolled in graduate education.[22] In all fields, 61 percent were in jobs where a degree was required, 55 percent were in jobs with a definite career potential, and just 38 percent were in jobs where both a degree was required *and* the job had definite career potential (see Figure 7). As can be seen from the figure, the range was large, from 54 percent to 80 percent in the first category, and from 27 percent to 54 percent in the last category, depending on the field of study in college. This was in a strong, low unemployment rate economy. In some occupational areas, demand may not be strong enough to require more college graduates; information from these surveys can help inform about that need.

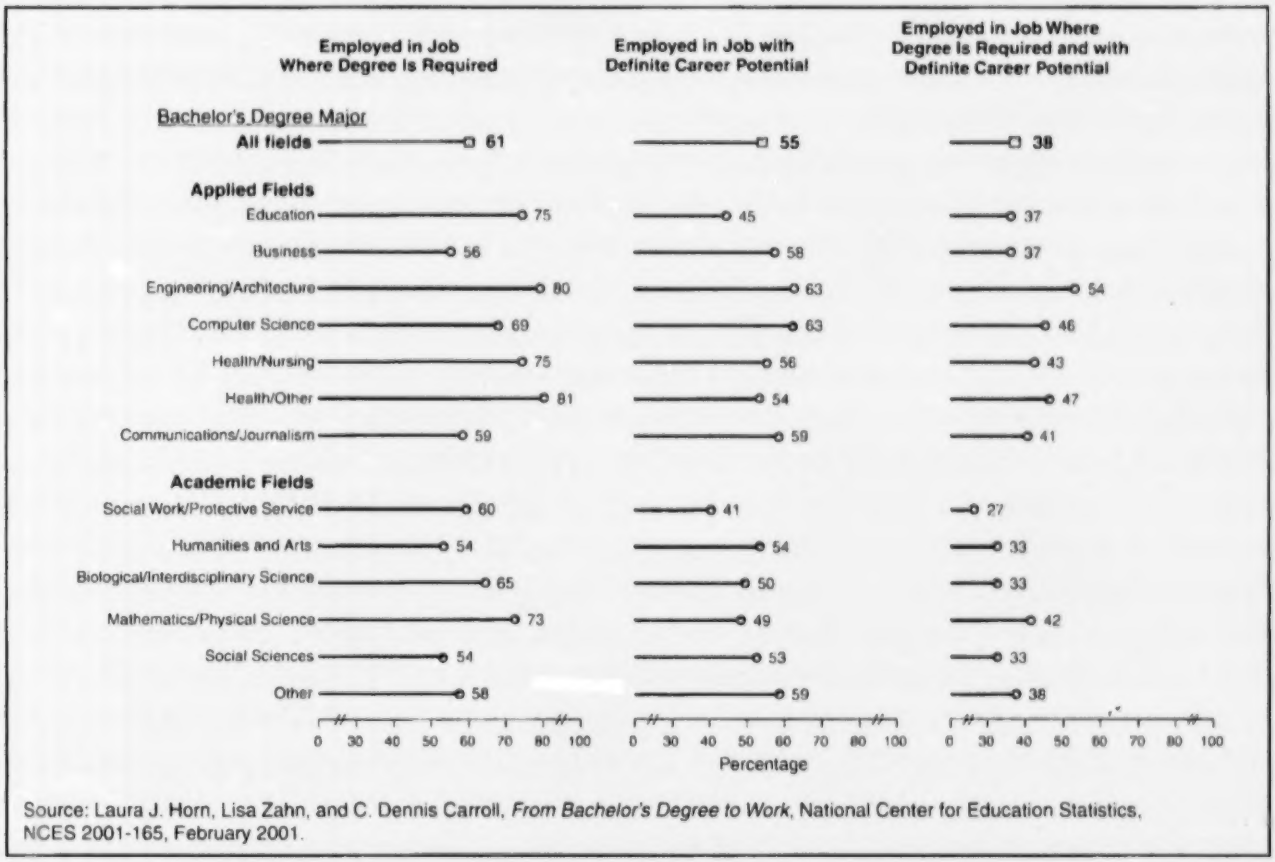
Some College

With an increasing proportion of high school graduates now entering college compared to 15 years ago,[23] an increasing proportion of 18- to 24-year-olds enrolled in college, and relative stability in the proportion of 25- to 29-year-olds getting a bachelor's degree, we can expect to have had a growing number of people who start college and not finish. One factor to be weighed in the balance is the tendency of such a strong economy (until the recession in 2001) to lure people out of school—and a strong and growing economy it was during most of the 1990s. While demand was strong and unemployment was falling, real wages did not rise over the 1987-2000 period. They fell from $41,672 (in 2000 dollars) to $38,650

22 Laura J. Horn, Lisa Zahn, and C. Dennis Carroll, *From Bachelor's Degree to Work*, National Center for Education Statistics, NCES 2001-165, February 2001.

23 Peaking in 1997, with some decline since.

Figure 7: Attributes of Jobs of 1992-1993 Bachelor Degree Recipients in April 1997 (those not enrolled in graduate education)


Employed in Job Where Degree Is Required
Employed in Job with Definite Career Potential
Employed in Job Where Degree Is Required and with Definite Career Potential
Bachelor's Degree Major
All fields 61 55 38
Applied Fields
Education 75 45 37
Business 56 58 37
Engineering/Architecture 80 63 54
Computer Science 69 63 46
Health/Nursing 75 56 43
Health/Other 81 54 47
Communications/Journalism 59 59 41
Academic Fields
Social Work/Protective Service 60 41 27
Humanities and Arts 54 54 33
Biological/Interdisciplinary Science 65 50 33
Mathematics/Physical Science 73 49 42
Social Sciences 54 53 33
Other 58 59 38
0 30 40 50 60 70 80 100
Percentage

Source: Laura J. Horn, Lisa Zahn, and C. Dennis Carroll, *From Bachelor's Degree to Work*, National Center for Education Statistics, NCES 2001-165, February 2001.

for all full-time year-round male workers with just some college. Earnings were stable for women, averaging $27,617 in 1987 and $27,190 in 2000 (see Figure 6). It was not the rise in real earnings that lured people to college nor attracted them to leave; however, earnings were increasing relative to people with less education, whose earnings were falling even more rapidly.

Another important avenue of exploration is whether employer demand was such that the increasing number of jobs available *required* the additional learning that was imparted in one to three years of college. This question cannot be easily settled with the data available. On the one hand, labor economists generally hold that if the employer paid more to such people than to those with less education, they must have paid more because the workers had higher productivity or lower training costs, presumably because of their greater knowledge or possibly because of work habits, motivation, etc. that are common to both school and jobs. We do know that their earnings are higher than the earnings of high school graduates, even if they have not been rising, and as earnings of high school graduates declined in real terms, there was a relative increase in the earnings of those with some college.

Another consideration is that the pool of young high school graduates has changed considerably in the last 15 years, and this is a likely factor in the decline in earnings of high school graduates (although we do not know how large it is). One change is that a higher

proportion now have only a GED; employers pay them more than they pay dropouts, but less than they pay those with a regular diploma.[24] Another change is that two decades ago, half of high school graduates did not enroll in college the fall after graduation, but by 1997, the percentage had fallen to 33 percent, edging up to 37 percent by 1999 (see Figure 3). The average labor market quality of high school graduates with no college must have dropped, given a reasonable assumption that, on average, those who went on to college were more qualified in employers' eyes than those who did not. Were the young people who had some college now better qualified for jobs that required advanced learning, or would the employers have hired many of them anyway, because they were the "upper cut" of the high school graduates and the people the employers would have paid a premium to get? We do know that employers will pay more to people who have greater literacy proficiency but have the same educational credentials, and we can expect that, on average, the high school graduates who opt for college now—but did not 15 years ago—have higher literacy achievement than those not going on to college.[25]

With the growing proportion of young people getting *some* college credit but no degree or certificate, it becomes more important to understand what kind of benefits ensue from this much education. There has been some analysis, but not enough in view of the increasing importance of the question. For an earlier period covering the last half of the 1970s and most of the 1980s, earnings gains were found for persons with postsecondary credits but no degrees (associate or bachelor's).[26] Using a different data set for the period 1984-1990, W. Norton Grubb examined the same question. His analyses of data from the Survey of Income and Program Participation (SIPP) led him to the conclusion that "entering postsecondary education, but failing to complete a credential, does not improve earnings reliably, unless perhaps a woman has three or four years of college. For men, the results are somewhat more positive."[27]

A recent study by NCES confirmed the payoff from the two-year degree and the four-year degree but had this to say about college attendance without a degree:

> *". . .after controlling for multiple aspects of student experience and background, the economic returns of some college credits apart from degree completion were negligible—irrespective of the number of credits completed."*[28]

We need to pursue research on this and reach some consensus in the research community about the returns to less-than-college completion. High school students, parents, and guidance counselors need reliable information; it may be more important to complete college than previously understood. And if the conclusions of these recent studies prove correct, this trend to a higher rate of non-completion is a matter of concern.

In any event, with more trying college and more not completing it, the spotlight needs to be put on the reasons for non-completion and the conditions that favor persistence to obtaining a degree. And, of

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24 Although the work of Richard Murnane, et al. has established that it was the dropouts who had demonstrated the lowest cognitive achievement in high school who got an advantage from obtaining a GED (see *Who Benefits From Obtaining a GED? Evidence From High School and Beyond*, National Bureau of Economic Research, June 1999), findings of different studies have varied and recent CPS data does not show a difference for full-time workers (personal communication from Andrew Sum).

25 Andrew Sum, *Literacy in the Labor Force: Results From the National Adult Literacy Survey*, National Center for Education Statistics, 1996.

26 Thomas J. Kane and Cecilia Elena Rouse, *Labor Market Returns to Two- and Four-Year Colleges: Is a Credit a Credit and Do Degrees Matter?* Working Paper Series, National Bureau of Economic Research, January 1993.

27 W. Norton Grubb, *The Returns to Education and Training in the Sub-Baccalaureate Labor Market: Evidence from the Survey of Income and Program Participation 1984-1990*, National Center for Research in Vocational Education, University of California, Berkeley, May 1995.

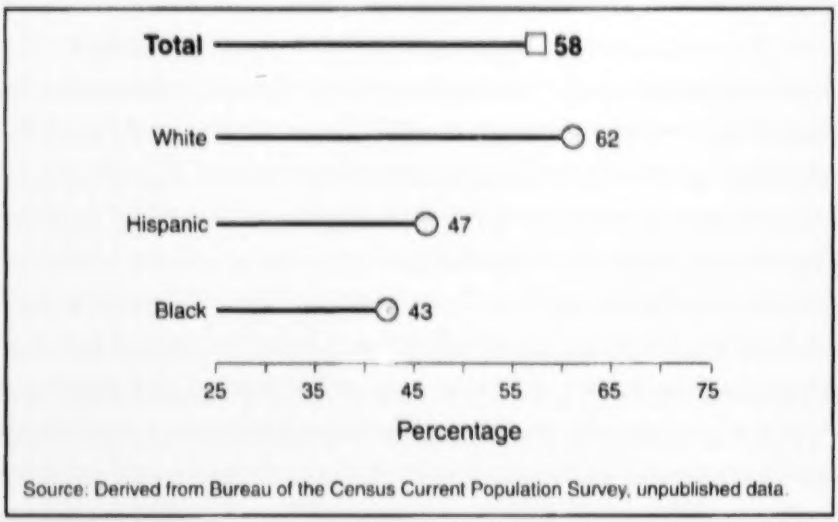
28 Brian Zucker and Royal Dawson, *Credits and Attainment: Returns to Postsecondary Education Ten Years After High School*, National Center for Education Statistics, NCES 2001-168, March 2001, page iv.

course, success at the college level is presaged by high levels of achievement in high school. (Clifford Adelman at the U.S. Department of Education has established that the largest single predictor of college completion is the rigor of courses taken in high school.)[29] It is also established that colleges vary a great deal in how many students complete them, even after controlling for the backgrounds of the students they enroll; the spotlight needs to shine on schools with high non-completion rates, as well as on the institutional factors and cultures associated with high rates of completion.

While we work on getting the non-completion rates down, we should also recognize the need to develop more avenues to success in the labor market than the traditional college route. More young people are making a try at college, possibly because they are getting the message that not to get a degree means being left in the backwashes of the economy. We need to offer a variety of options at the high school level and to high school graduates. We need a fresh look at developing other opportunities. And when we do studies of whether a year of college—with no degree or certificate to show for it—makes a difference in labor market success, we need to make a comparative study, one that includes alternatives of the kind discussed below. The United States has been too much a one-option nation for getting ahead, unlike some of our competitors, and one option does not fit all, particularly in a country with such a diverse population.

Whatever the consequences of college non-completion and insufficient options, the burden falls unequally on racial and ethnic groups. In 1998, White 25- to 29-year-olds who had a two-year or four-year college degree comprised 62 percent of those who had gone to college. For Black 25- to 29-year-olds, it was just 43 percent, and for Hispanics it was 47 percent (see Figure 8).

Figure 8: 1998 College Completion, 25- to 29-Year-Olds with a Four- or Two-Year Degree as a Percentage of Those with Some College, by Racial/Ethnic Group



Source: Derived from Bureau of the Census Current Population Survey, unpublished data.

29 Clifford Adelman, *Answers in the Tool Box: Academic Intensity, Attendance Patterns, and Bachelor's Degree Attainment*, U.S. Department of Education, June 1999.

Community colleges have proven to be responsive and flexible, both in meeting the needs of students and in recognizing the educational and skill needs of employers.[30] Inadequate treatment has been given to these colleges in the historical statistical categories presented in this paper. Only relatively recently have those students been separated from the category of "one to three" years of college. There are also promising efforts to link the last two years of high school and first two years of college programs in occupational education; the effort, called "Tech-Prep," is supported with grants to states from the U.S. government (although more evaluation of outcomes is needed).

Recently, ETS issued a report that chronicles an important development, the surge in certificate programs, typically one-year long and tied closely to industry needs. The growth in such programs is expanding in community colleges and other places, with much of the growth coming from programs provided by employers.[31]

Expanding the avenues beyond spending some time in traditional college includes the kind of improvements in high school education that make graduates more employable, such as the High Schools That Work Consortium of over 35 states, created and operated by the Southern Regional Education Board (SREB). The effort in these high schools—now over 4,000 of them—is to increase academic achievement and occupational education—and interrelate the two. Youth apprenticeships also bring school and work-based learning together.

No one wants to steer high school students away from seeking a college degree. On the other hand, no one would want to hold out only the path of a traditional college education they all have to stumble down if more choices can be created that result in success in the labor market. Of course, the quality of that education is also critical.

High School Graduation

There is enough of a consensus that all our young people need to complete high school that not much more needs to be said about it. There should be considerable consternation that we have made no progress in the last several decades in the percentage who get a diploma after successfully completing four years of regular high school (see discussion above). The lumping of regular diplomas and GEDs together has caused a misunderstanding. According to NCES, in 2000, 88.1 percent of 25- to 29-year-olds completed high school.[32] If we had a separate number for attainment of a regular high school diploma, however, it would likely be in the range of 70 to 75 percent, with no improvement in three decades (given the effect of immigration, it may be somewhat higher for those born in the United States).

There is new focus on the high schools, in terms of improving academic achievement. Standards, accountability, the problem of "senioritis," and high school exit exams are all getting attention. But these efforts to raise achievement and introduce more rigor will not reach the 25 to 30 percent who drop out. Those who have no diploma have limited earning opportunities, and they may have closed off options to a college education. In addition to academic rigor, we need to explore options that broaden the appeal to graduate and get the diploma, and we need to find options that prove to work in terms of making graduates more attractive to employers, as well as to colleges. A new report on the high school senior year by the National Commission on the High School Senior Year offers some sound recommendations for doing so.[33]

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30 For a summary, see Richard J. Coley, *The American Community College Turns 100: A Look at its Students, Programs, and Prospects*, Policy Information Report, Policy Information Center, Educational Testing Service, March 2000.

31 Anthony P. Carnevale and Donna M. Desrochers, *Help Wanted... Credentials Required: Community Colleges in the Knowledge Economy*, Educational Testing Service, 2001.

32 National Center for Education Statistics, *The Condition of Education 2001*.

33 National Commission on the High School Senior Year, *Raising Our Sights: No High School Senior Left Behind*, October 2001.

There are two more recent comprehensive assessments of the high school and what needs to be done:

- The American Youth Policy Forum's report *High Schools of the Millennium: Report of the Workgroup* (2001), and
- *Transforming the American High School: New Directions for State and Local Policy*, authored by Michael Cohen and published by Jobs for the Future and The Aspen Institute in December 2001.

A lot of the staff work has been done. Action now could be well informed.

One promising avenue to interest more high school students to stay in school and more graduates to meet employer requirements is the effort known as "School to Careers," or "School to Work." This was supported by the federal School to Work Opportunities Act passed by Congress in 1994, and while now expired, the approach has a strong presence in many states. An important component of this approach is the use of employer work sites for "work-based" training and education, combined with high standards for academic achievement.

The results of over 100 studies of this initiative have been summarized in a recent report titled *School-to-Work: Making a Difference in Education*.[34] The authors found that "there is evidence that school-to-work provides benefits for students, teachers, and participating employees." The approach supports academic achievement, career preparation, and youth development. Teachers were found to support it and employers were enthusiastic. With federal support now withdrawn, expansion rests with the states.

In this period of "standards-based education reform," the attention has been to the quality of a high school education. This is understandable, given little improvement in the achievement of 12th graders over the last 30 years and the dissatisfaction expressed by employers about the employment readiness of our high school graduates who do not continue on to college. Quantity, however, is also important, particularly given the subject of this section on "The Economy and Labor Market Connection." A precise measure of the high school dropout rate would put it at between 25 to 30 percent for the last quarter of a century. If a great many high school graduates are deficient as they enter the labor market, what about the quarter of them or so who leave without completing high school (particularly when those dropout rates are higher for subgroups of the population)?

While this non-completion rate has slipped from national attention during the current wave of education reform, national and state dropout prevention programs have come and gone since the 1960s ("Social Dynamite," as the dropout situation was termed in the book with that title by James Conant). But the programs were to no avail, at least in terms of the nation as a whole. Getting more students to stay in school and graduate is likely intertwined with what students think high school completion has to offer them and how relevant it is to their success in the employment world. And that, in turn, is likely intertwined with the questions about quality, about alternative avenues discussed above, and about persistence and continuity in creating—and sustaining—the kind of school and employer partnerships in the school-to-work initiatives and in youth apprenticeship-type arrangements.

34 Katherine Hughes, Thomas Bailey, and Melinda Mechur, *School-to-Work: Making a Difference in Education*, Columbia University, Institute on Education and the Economy, 2001.

Summary and Conclusions

This report marches not toward a conclusion, but a question. After setting forth the facts that a quarter century went by with no growth in a) the high school graduation rate, and b) the rate at which young people get a four-year college degree, and c) a new era, when for the first time, young people are getting no more education than their parents, we ask the question: Is this set of facts alarming? Worth moderate concern? Or satisfactory?

To pose the central question, this report has generally focused on the overall averages for the United States as a whole, as the country might be looked at in international comparisons. A lot of sub-stories are concealed in this average: men falling behind women in graduation rates (and women's education growth raising the average the last several years); minorities still behind the majority in education level; and Asian Americans ahead of all other groups. These have been mentioned throughout this report, but the bottom line for the nation is that we are not growing educationally.

We are talking about quantity. In terms of quality, achievement test scores of 12th graders are basically flat over the past 30 years (dipping in the 1970s and recovering in the 1980s). And we have no information about the trends over time in the quality of post-secondary education (although some efforts are underway to finally measure it). There *is* attention to improving quality in K-12 education for the last decade; that is what the education reform decade has been about.

While not trying to tell the reader what to think about the overarching question, the author does maintain that this break with the nation's past experience of continually raising educational attainment and opportunity is worth attention and examination. The report attempts to set forth facts and conditions that could help in thinking about the question, and if corrective effort seems called for, some of the considerations involved in untangling what is happening. A few points made are the following:

- The level—even falling—high school graduation rate has been masked by the inclusion in the statistics of GED certificates (which have been growing). While the GED is a very useful program, the statistics for it should be gathered separately.

- While high school dropout statistics fail to disclose what is happening, the statistics available on college non-completion are worse (although NCES has a longitudinal survey that establishes the degree of college completions and has the potential for measuring the trend in completion rates).

- The bulk of statistics available regularly track enrollment in college—and *enrollment* has been rising over the last 15 years. But until the last several years, completion rates have not; the *non-*completion rate has been rising, a fact that seems hardly to have been noticed.

- The United States has lost its preeminence in the world in higher education completion rates, and 13 countries have a lower dropout rate.

- Projections show that occupations requiring a college degree will grow considerably over the next decade and faster than employment generally. In this period, the baby boomers will be retiring and will have to be replaced.

- Of relevance in making judgments about the leveling off of the high school and college completion rate is understanding how important education opportunity has been in U.S. history, how we have relied upon it, and what the accumulated research shows are the measured benefits and effects of a college education, both non-economic and economic. The report reviews the accumulated knowledge.

Non-economic

- Improvements in cognitive development in verbal, quantitative, oral communication, analytical, and critical thinking skills.

- Aesthetic, cultural, and intellectual values.

- Social self-concept, self-esteem, personal adjustment, and psychological well-being.

- Use of principled reasoning in judging moral issues.

- Increased participation in civic and community affairs, in political affairs, and in volunteering.

Economic

- Higher earnings, relative to those with less education (and over recent decades, increased relative earnings). But *absolute* earnings at the associate and bachelor degree levels have been rather flat the last dozen years, with some increase the last couple of years at the bachelor's degree level; earnings for people with degrees beyond the bachelor's degree have been growing.

- Although earnings of people with some college credits but no degree have been falling for men and are stable for women on an absolute basis, earlier studies have found some increased earnings over high school graduates. More recent studies by NCES and the National Center for Research in Vocational Education, however, found no or little earning advantage for attendance without completion. More research is needed on the returns for getting college credits but no degree, after taking into account other attitudes and characteristics that make a difference to employers.

- While college graduates are more likely than others to enter the higher paid and higher prestige occupations after graduation, a high percent are found in jobs that do not require a college degree, and this varies considerably by the occupation graduates are employed in. Regular availability and analysis of such surveys would help in making judgments about the whether we have enough people getting college degrees.

- Increased education is associated with increased national economic growth and productivity.

- Education is a means of achieving more equity in the earnings of racial and ethnic minorities.

□ Resumption of growth in education completion involves such things as:

- Creating more alternatives in the high school program that can entice more students to complete high school—enlarging the pool of students available to go to college. Improving high school education has recently been closely examined by commissions, study groups, and scholars; an agenda for change is available.

- Elevating the importance of high school completion rates to equal status with increasing high school achievement standards in the education reform movement.

- Increasing the rigor of courses in high school and raising standards so that those who go to college are better prepared; the largest single predictor of completing college is the rigor of the courses taken in high school.

- Measuring and reporting college completion rates regularly for the nation and for individual institutions, and comparing institutions that are similar in the makeup of their entering student bodies.

- Focusing on getting low income and minority students *through* college as much as getting them *in* college.

- Exploring ways to distinguish among higher education institutions based on their track record in the persistence rates of students to graduation and providing such information to parents, students, and guidance counselors.

- Reversing downward trends in the proportion of college costs covered by federal financial aid awards and in state appropriations for higher education as a proportion of state financial resources.

Reactions to the statistics and information provided in this report, and with the way the author has framed the questions, will differ. There will be consternation that graduation rates have shown little change over the last quarter century, and there will be people who do not see in this a pressing matter for concern. (After all, the United States has emerged as the most powerful country, with the strongest economy, in the world.) Stimulating such examination, disagreement, and debate—and informing it—is the objective of this report.

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